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MORTALITY
OF
PHILADELPHIA

1807-26

EMERSON

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MEDICAL STATISTICS:

BEING

A SERIES OF TABLES,

SHOWING

THE MORTALITY IN PHILADELPHIA,

AND

ITS CAUSES.

BY

GOUVERNEUR EMERSON, M. D.

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MEDICAL STATISTICS, &c.

[Extracted from the American Journal of the Medical Sciences for November, 1827.]

IN the investigation of human affairs, and the various circumstances which relate to and govern them, statistical calculations, by giving distinctness to views, and accuracy to conclusions, have been found eminently useful. Applied to subjects connected with medicine, at present the most uncertain of the sciences, they may prove of essential service, especially to the branch of public hygiene, as by demonstrating the existence of evils they may lead to a removal of their causes, and serve as a test by which to determine the success or inefficacy of the measures resorted to for that purpose. They may likewise become useful as a means of estimating the comparative value of those systems of medicine, which from time to time succeed each other. Indeed, such an application of medical statistics has already been made in Europe; but the warmth and obstinacy which at this time, distinguish the doctrinal controversies of rival sects, may justly be considered as productive for the most part, of partial views and suspicious conclusions. Estimates upon these subjects, should therefore be received with much caution, unless when made by such as are known to owe neither allegiance to, nor bias for, a particular party, or who possess so rare a degree of candour as to enable them to state facts without partiality or concealment.

The following calculations were projected for the support of no preconceived speculations or opinions, but undertaken solely for the purpose of ascertaining those results which naturally flow from them. Many of these will be found extremely interesting, especially such as relate to the comparative mortality of different diseases, the ages at which they most frequently prove fatal, and the mean duration of human life at this epoch in Philadelphia.

Many places possess certain peculiarities, capable of exerting more or less influence upon calculations of this nature, and which can only be well understood by persons very familiar with them. For this reason it has been thought most adviseable to avoid making formal comparisons with the statements of other cities, and to confine the sphere of observation in the present article, altogether to the locality of Philadelphia, a compendious history of the mortality, with observations upon many of the diseases of which, will be found in the following tables, since the year when the subject was first made one of regular record. The date of this interesting event extends no further back

than the year 1807, when through the influence and exertions of Professor James, the first authentic bill of mortality for the city and suburbs of Philadelphia, was formed and published. No interruption has since taken place in these annual reports, which from time to time have had new interest imparted to them, by the addition of other particulars; such, for example, as the distinction made between males and females, the designation of colour in the deceased, and the account of births.

The authenticity of the Philadelphia bills of mortality may be regarded as resting upon very solid grounds. From authority vested in the Board of Health, this municipal power makes it obligatory upon physicians to give certificates designating the name, age, and sex of all who die under their care, and sextons are bound by still heavier penalties, not to permit the interment of any dead body, until such certificate is obtained, which he returns to the health office on the last day of every week, for publication.

The accuracy with which the diseases are designated in these certificates rests chiefly upon the general intelligence of the medical profession in this city, the members of which are very much in the practice of testing their pathological opinions by autopsical examinations. Further evidences of fidelity in this respect are afforded by the general agreement of the different bills of mortality with each other, and the variations exhibited by certain diseases in correspondence with the influence of well known agents. That many errors, and much vagueness exist in regard to praticular details, must be evident to every one well versed in the medical science of the present day. The heads of debility, decay, atrophy, marasmus, consumption (as an infantile disease,) may be cited as affording the most frequent examples of misrepresentation, but still, the correspondence subsisting between the annual returns, is sufficient to show that the affections even thus reported depend upon the continued operation of some uniform causes.

For the purpose of ascertaining the number born, the various practitioners of midwifery are required to render an account at the Health Office of all births. With regard however to this department, there is some reason to suspect a deficiency in the returns, especially from the outskirts of the city and liberties. But the registry of the dead has, for the most part, been kept with a care and fidelity creditable to those who have had its superintendence, and especially to the present clerk, who, for the last ten years, has conducted its details.

General Observations on the Topography and Climate of Philadel-

phia.—The city of Philadelphia lies in north latitude 38° 57′, and longitude 1° 54′ east from Washington.* It is situated on the western shore of the river Delaware, and extends over slightly elevated ground about two miles to the banks of the river Schuylkill, five miles above its confluence with the Delaware. The last named river is about a mile wide at the town, and has sufficient depth of water to admit ships of a very large burthen, whilst the Schuylkill, on the other side, is navigable for sea vessels of moderate draught. The tide in the Delaware rises, on an average, to the perpendicular height of about seven feet. The water continues fresh for more than fifty miles below the city. Its distance from the Atlantic ocean, by the natural course of the river and bay, is about one hundred and twenty miles, but not more than fifty-five miles by a direct line in an easterly direction.

The portion of the isthmus on which the town stands, is of the tertiary formation, consisting of sand and gravel, for the most part overlaid with a thick stratum of clay, the whole resting upon a primitive basis. That it was once covered by the sea, is clearly shown by the marine deposits, consisting of bones, teeth, shells, &c. found below the natural surface. Vegetable relics have likewise been met with. A few years since, hickory nuts were discovered in digging a well at a depth of more than 30 feet. In one of the highest points of the city plot, the trunk of a buttonwood (Platanus occidentalis) was found imbedded in a black mud, and surrounded by acorns and leaves.

By digging at various depths, water is easily obtained in every part of the city and suburbs. Near the rivers it may be procured within ten or twelve feet of the surface; its depth in other parts is usually about thirty feet Its qualities were excellent before the city became so populous, and its sources were contaminated by infiltrations. At present, an abundant supply of most wholesome and palatable water has been introduced from the Schuylkill.

The climate of Philadelphia, appears to have partaken in the change which of late years has been noticed in most parts of the country. This variation is most strikingly manifested as respects the intensity and duration of the cold weather. It has been observed, that during the last century, the winters were more uniformly cold and the rivers more completely and for a longer time obstructed, than at present, when it often happens that the ice does not become stationary on the Delaware through the whole season, and when it

* Or 75° 8′ 45″ west from Greenwich.

does become fixed, seldom remains so longer than a few days. We find it recorded, that in 1704, snow fell three feet deep, and in the winter of 1779–80, the Delaware continued frozen for three months. Moreover, that in 1764, 1791 and 1797, this river was completely frozen in one night, so as to be passable the next day. Instances of such intense cold have not occurred within the present century.*

From an examination of the records of the *Rain Gage*, kept at the Health Office, in a central part of the city, it appears that, from March 1820 to February 1827, inclusive, a period of seven years, the average quantity of rain for the seasons is as follows: For the three months of Spring 8.29 inches—Summer 9.54 inches—Autumn 10.54 inches—Winter 8.15 inches.

The greatest quantity which fell during that time, in the twenty-four hours, was four inches on the 3d of October, 1820. The largest quantity in forty-eight hours was 5.65 inches, on the 3d and 4th of the same month, in the same year.

The prevailing winds throughout the year are from the westward. Viewed according to the seasons, it may be observed, that in the Spring and Fall, the winds are more variable than during the rest of the year. Their tendency in the Spring and Summer, is more from the eastward than at other seasons. During Summer they usually come from the westward and southward, but in winter, from the westward and northward. When easternly winds prevail, they generally proceed from a northernly direction. Cloudy and rainy weather are their common attendants, the weather usually clearing away by their shifting first to the southward, and then to the west or northwest, from which points they often blow with great violence.

Observations on the Tables.†

Table I.

This table presents a series of observations made on the climate of Philadelphia, during ten years, viz.: from 1811 to 1820, inclusive; showing the changes of temperature indicated by Fahrenheit's thermometer for each month, and season of that period. It is formed from

* For more minute information relative to the temperature of the weather in particular months and seasons, see Table II.

† These are by no means intended to embrace all the views worthy of notice which the tables develope, and doubtless many more of equal, and perhaps greater interest will present themselves to others who examine them.

observations originally published in the Eclectic Repertory, and though not continued to so late a date as would have been desirable, still on account of the regularity and accuracy with which they were conducted, we have chosen them in preference to any more recent ones with which we are acquainted. From these observations, it appears that the mean temperature of the months estimated from an average of ten years is, for January, 30°—February, 32°—March, 48°—April, 50°—May, 59°—June, 71°—July, 75°—August, 72°—September, 65°—October, 55°—November, 46°—December, 34°.

The average mean temperature of the seasons is as follows, viz.: The three months of Spring, 50°—Summer, 73°—Autumn, 55°—Winter, 32°.

The lowest fall in the thermometer observed in the above mentioned period at eight o'clock, A. M. was 4° above zero, on the 15th of February, 1817. The highest rise in the same time at three o'clock, P. M. 97° on the 12th of June, 1818.*

Table II.

Is an abstract from the census of the city and county of Philadelphia, taken in 1820, by order of the general government, showing the number and description of inhabitants in the wards and districts, from which returns of interments are made.

The observations we shall offer upon this subject, will be directed in the first place to the white population.

In this the proportion of the sexes is as 111 females to 100 males, a disparity which has been attributed for the most part to the greater risks of life encountered by the male sex in their various occupations and pursuits.† In proof of this we find from an examination of the table that the number of males under ten years of age exceeds that of the females; but when the estimate is continued so as to embrace

* It is to be regretted that the Philadelphia bills of mortality furnish no precise data, by which a table can be formed, to show the deaths per month by the *principal diseases*, and thus exhibit the immediate influence of the seasons upon their mortality. Interesting calculations made for other places, show that chronic complaints are not much affected by such influence, which is chiefly displayed upon the acute forms of disease.

† The average proportion for the whole United States, is, however, very different; namely, 97 females to 100 males. In the new states, the excess of males among the children is observed to be very great. In Alabama, Illinois, Missouri, Mississippi, and Indiana, all of which have been lately settled, there are 76,067 boys, and only 70,033 girls under ten years of age; that is, at the rate of 109 boys to 92 girls.

the sixteenth year, the balance is considerably in favour of the females, the males having in the mean time been reduced by the operation of the above mentioned circumstances.

The relative proportion existing between the sexes under ten years of age, is about 3.3 per cent. in favour of the males; but when the estimate is made to include those under the sixteenth year, the females are found to be the most numerous in the proportion of 2.4 per cent.

The females under the 26th year exceed the males under the same age, in the ratio of 8.8 per cent. Under the 45th year, the excess of females is 9.1 per cent., or as 100 females to about 90.9 males; whilst the excess of females of and beyond this age is nearly 26 per cent., or at the rate of 100 women to only 74 men.

With regard to the *black* population, an estimate of all ages shows the relative proportion of the sexes to be 100 females to 71 males. Under the 14th year, the proportion is equal, but when the estimate is extended so as to include all under the 26th year, the females exceed the males 30 per cent.; that is, at the rate of 100 females to 70 males. Reckoning all under 45, the excess of females is 28 per cent., or as 100 to 72; but in the amount of the sexes of 45 years and upwards, the number of females exceeds that of the males nearly 31 per cent.; that is, for every 100 women there are only 69 men.

The following statement affords a condensed comparative view of the proportion of the sexes at various periods of life:—

	Whites.	Blacks.
Under 10*	100 males to 96.7 females.	
Under 14		100 females to 100 males.
Under 16	100 females to 97.6 males.	
Under 26	100 do. to 91.2 do.	100 do. to 70 do.
Under 45	100 do. to 90.9 do.	100 do. to 72 do.
Of 45 and upwards,	100 do. to 74 do.	100 do. to 69 do.
Proportion of all ages	100 do. to 89 do.	100 do. to 71 do.

The number of whites of and over 26, is 39,335 } Being in the proportion of 56
under 26, 70,050 } of and over 26, to 100 under that age.

The number of blacks of and over 26, is 5,191 } Or, as 84, of and over 26, to
under 26, 6,193 } 100 under that age.

The number of whites of and over 45, is 12,739 } Or, as 13.3 of and over 45, to
under 45, 96,646 } 100 under that age.

The number of blacks of and over 45, is 1,381 } Or, as 13.8, of and over 45, to
under 45, 10,003 } 100 under 45.

* The blacks under 10 and 16, and the whites under 14, are not designated in the table.

Table III.

This table exhibits the number of deaths in the city and suburbs of Philadelphia, for each one of a series of twenty years, viz: from January 1st, 1807, to January 1st, 1827, inclusive; showing at the same time those which occurred from the most prevailing diseases.

From the amount of every year, as represented in this table, the number reported in the bills of mortality under the head of *still-born*, are excluded, as never having possessed a proper existence; a rule applicable to all the subsequent statements, unless otherwise specified. Their numbers appear in a separate column, and it may be well to remark here, that in the public records of Philadelphia, no discrimination is made between the abortions of the first months of gestation, and the premature and dead-born of the latter periods, which, with perhaps a very few exceptions, are disposed of in the numerous burying grounds throughout the city and suburbs, and reported with other interments at the Health Office. That the bills of mortality may in future show the proper distinctions to be made under this head, it would be well for the Board of Health to issue suitable instructions. Until some regulation for this purpose is adopted, the large numbers of still-born reported may serve, at least with superficial observers, to cast a shade of reproach upon the females and medical profession in Philadelphia.

The highest number of deaths for one year, contained in the series, is 4372, in 1823; the lowest number is 1884, in 1809. The amount for the first ten years of the series is 20,585; for the remaining ten years, 32,419. The total number of deaths for the whole time is 53,004.

The prevalence and fatality of particular diseases in different years, is strikingly exemplified in this table. Under the head of *Diseases of the Lungs*, the variation from year to year is chiefly observable in the column of *Acute affections;* whilst the annual proportion from *Consumption* seems to have advanced at a steady step with the progress of population. The highest number of deaths by this disease in one year, is 587, reported in 1826; the lowest number 216, in 1813. The whole mortality by consumption in the twenty years, is 7977.

Under the head of *Acute Diseases of the Lungs*, the deaths reported in the bills of mortality under the various titles of Pleurisy, Inflammation of the Lungs, Breast and Chest, are included. The greatest mortality for one year exhibited in this column, is 222, in 1826; the lowest 61, in 1813. The number for the whole series, is 2284; which, added to the amount from consumption, gives a grand total of 10,281 deaths in twenty years from *Diseases of the Lungs.*

Under the head of *Fevers*, which in this table includes only those of most frequent prevalence, striking fluctuations are observa-

ble in all the columns. That which contains the totals, shows a steady increase with the progress of time and population, until the year 1818, when the amount rises to 492, chiefly produced by the prevalence of a bilious fever, of a typhoid and highly mortal character, almost exclusively confined to the blacks inhabiting the narrow streets, courts and alleys of the south-western parts of the city and suburbs.* The still greater increase observable in the succeeding years, until the amount in 1823, is no less than 744, depends upon causes of an entirely different nature, which, as they have seldom or never been known to exist to the same extent before in this city and its vicinity, must be regarded as constituting an extraordinary and casual event.† The bill of mortality for the year 1820, was the first that swelled from the effects of this epidemic, which spread throughout the neighbouring country on all sides, and encroached upon the outskirts of the town, but rarely showed its influence upon the interior parts. Indeed, as I formerly stated in noticing the same subject, it was curious to observe how accurately the invasions of the sickly air during the summer and fall months, were limited by the pavements, few or none of those who kept within them, having been affected with what acquired the popular designation of *Country Fever.*‡ Strange as it may appear, the atmosphere of the city proper was seldom more free from the *causes* of disease, than during the years wherein the bills of mortality exhibited the greatest number of deaths. With the view of ascertaining as far as practicable, the comparative healthiness or unhealthiness of the city and suburbs, the Board of Health issued, in 1823, circulars to the physicians, requesting them to note in their usual certificates of mortality, the districts in which their deceased patients had resided. This measure, though adopted late in the season, clearly proved that the proportion of interments was as anticipated, much smaller for the city than for the suburbs, as the following short statement will clearly show.

The number of interments reported at the Health Office, were from—

* For a particular description of this singular epidemic, see the Philadelphia Journal of the Medical and Physical Sciences, vol. 3. p. 193.

† The fatality of this epidemic may in some measure be judged of, by comparing the sum of the first ten years of the series of totals in the column of Fevers, viz: 1540, with that of the last ten years, which is 4580!

‡ See the Philadelphia Journal of the Medical and Physical Sciences, vol. viii. p. 143.

August 9th to the 16th - -	130	Of which there were from the city	53
16th to the 23d - -	113	do.	48
23d to the 30th - -	129	do.	50
30th to Sept. 6th - -	112	do.	45
Sept. 6th to the 13th - -	137	do.	63
13th to the 20th - -	115	do.	15
	736		274

In the two hundred and seventy-four deaths reported from the city, sixty-five, or more than a fourth were from the Alms-house, which at that time was crowded with paupers, chiefly from the suburbs.

Cases of the prevailing remittent and intermittent fevers, were however, to be met with in all parts of the city proper, but their origin could nearly always be traced directly to the air of the country or outskirts of the town, a short exposure to which in the evening or night was sufficient to give rise to those diseases.

In the column designating the deaths by typhus, we observe that the epidemic seems to have terminated in that form more frequently in 1823 and 1824, than in other years. It is to be regretted that so many instances are reported, wherein the type is left undesignated, as for example, in 1823, where the particular character of two hundred and forty-three cases of fever which terminated fatally in that year cannot be ascertained.

We are happy in being able to state that at this time, the sources of the disease appear exhausted, as the present season has proved unusually healthy. This we have it in our power to demonstrate very clearly, by a reference to the records of the Philadelphia Dispensary, from which we make the following estimates of the number of applicants to that institution for medical relief in several years, during the month of August, the most sickly of the season.

Years.	1823.	1824.	1825.	1826.	1827.
Patients.	694	347	363	310	264

The column showing the deaths by *yellow or malignant fever*, presents the highly interesting fact, that for the last twenty years, the whole mortality amounts to only one hundred and twenty-two, of which number seventy-three occurred in 1820. This statement will perhaps excite no little surprise at home, and doubtless be greatly dis-

credited abroad, but may nevertheless be relied upon as correct. That the amount should appear to most persons less than they would expect, is probably owing to the high degree of alarm which usually attends the appearance of a single case of yellow or malignant fever, and magnifies the occurrence, by association with former epidemics, to a fearful extent.

The column of *totals* under the head of *Inflammations*, shows a steady increase in the phlegmasiæ, with that of population, the variation in the whole series running between four hundred and forty-seven, in 1826, the highest extreme, and one hundred and thirty-eight in 1809, the lowest number. The amount for the whole series is four thousand seven hundred and fifty-eight.

Of *Inflammation of the Brain*, the greatest number of deaths reported for any year, is sixty-six in 1824. The lowest eight, in 1813. The whole amount for twenty years is five hundred and eighty-three.

As might be expected, the fluctuation is much greater in the column of inflammations of the *Lungs and Chest*. The highest number of these is two hundred and twenty-two, opposite the year 1826. The lowest, sixty-one, in 1813. The amount for the whole series is two thousand two hundred and eighty-four.

No very great variation is observable in the column embracing inflammation of the *Stomach*, *Bowels*, *and Peritoneum*, the highest number of which for any one year is one hundred and nineteen, in 1824; the lowest twenty-nine, in 1807. The whole number for the twenty years, is one thousand two hundred and ninety-one.

Of inflammations of the *Liver*, the highest amount is fifty-four, in 1826; the lowest, nine, in 1807. Total for the whole series, five hundred and eighteen.

With regard to the columns representing the deaths by other phlegmasiæ, such as inflammation of the *Heart*, *Pericardium*, *Spleen*, &c. there is little worthy of observation, except, that as these are not to be found in the early bills of mortality, they must either have become more frequent of late years, or been designated with greater care.

In the column of totals, under the head of *Dropsies*, the sums vary between two hundred and seventy, in 1825, the highest extreme, and ninety-eight, in 1813, the lowest number. The whole amount for the series is three thousand four hundred and seventy-four.

The greatest number per annum of *Hydrocephalus*, is one hundred and forty-seven, opposite the year 1823; the lowest thirty-eight.

in 1813. The whole amount of the series is one thousand six hundred and two.

The column of *Dropsy of the Chest*, presents a greater annual fluctuation than any other under the general head, varying between the extremes of forty-seven in 1823, and five in 1818. The amount of the whole series is five hundred and twenty-one.

The *undesignated dropsical* affections reported annually, consist, with perhaps very few exceptions, of *Anasarca* and *Ascites*. They vary between one hundred and thirty-one, in 1819, the highest, and thirty-five, in 1814, the lowest number. The whole series amounts to one thousand three hundred and fifty-one.

Under the head of *Bowel Complaints*, great variation is conspicuous in all the columns. In that containing the annual totals, the highest number is five hundred and sixty-two, opposite the year 1823. The lowest, one hundred and fifty-three, in 1816. The amount of the whole series is six thousand two hundred and eighty-nine. The fact that much the highest number of deaths from these affections occurred during the greatest prevalence of the epidemic remittent and intermittent fevers, shows how much all these diseases depend upon the same kind of atmospheric constitution.

In the column containing the deaths per annum of *Cholera*, the sums vary considerably, the highest number being two hundred and sixty-five, in 1823, and the lowest ninety, in 1816. The whole series amounts to the formidable sum of three thousand eight hundred and twelve.

The annual reports of deaths from *Diarrhœa and Dysentery*, are so nearly alike in respect to numbers, that they have both been placed in the same column, the different sums of which vary almost as much as those of cholera. The highest number is two hundred and ninety-seven, in 1823; the lowest forty-four, in 1812. The whole amount for the twenty years, is two thousand four hundred and seventy-seven, making, when added to those from cholera, the total amount of deaths from *Bowel Complaints*, six thousand two hundred and eighty-nine.

The number of deaths reported annually under the head of *Convulsions*, seems to have steadily increased with the progress of population. The highest number for one year in the whole series, is three hundred and sixty-eight, in 1824; the lowest one hundred and twenty-seven, in 1807. The amount for the twenty years is three thousand, seven hundred and thirty-one.

Of *Croup*, the greatest mortality per annum is eighty-nine, in 1820; the lowest number in the series, twenty. The total amount of deaths in the twenty years, is one thousand and forty-one.

The column showing the deaths by *Hooping Cough*, exhibits great fluctuation. The highest number in a single year, is one hundred and fifty-one, in 1819; the lowest six. The whole amount in twenty years, is eight hundred and five.

The number of deaths reported from *Measles*, shows, as might be expected, great variation from year to year. In seven years of the series, no deaths were reported from this disease. The highest number is one hundred and fifty-six, in 1823; the lowest, one. The total amount for twenty years, is six hundred and sixty-seven.

With regard to *Small-Pox*, we find, as in the case of measles, seven years out of the twenty, wherein no deaths by it were reported. The greatest mortality in any one year, occurred in 1824, when the number of deaths was three hundred and twenty-five. The next highest number is one hundred and sixty in 1823. The amounts of other years vary from these to only one. The total for the twenty years is one thousand and eighty, the proportion of which is about twenty, out of every thousand deaths by all diseases.

Although the greatest mortality from this loathsome distemper took place at a time when it might have been supposed that few or none remained unprotected, still the amount for so long a period furnishes a pleasing comment upon the experience of former times. It has been estimated, that during the first thirty years of the eighteenth century, the number of deaths from small pox in London, was seventy-four out of every thousand: and during an equal period at the close of the same century, the amount had increased to nearly one-tenth of the whole mortality. This multiplication has been ascribed to the introduction and practice of inoculation, which, although esteemed one of the greatest improvements ever introduced into the medical art, had, by leading to a more extensive circulation of the contagion, actually promoted the ravages of the disease it was intended to ameliorate. How striking the contrast between these consequences and those resulting from the substitution of vaccination.

Under the head of asthma, the sums representing the annual number of deaths vary from twenty-one, in 1825, to four, in 1808. The whole amount of the series is two hundred and five.

The column containing the deaths by *Apoplexy*, though very well filled, is perhaps entitled to many more, since it is highly probable that many reported as sudden, were from this cause. An examination of the table, showing the ages at which the deaths under this last head took place, presents such a correspondence with those which occurred from apoplexy, as almost to confirm the observation.

The greatest number recorded under this head for one year, is sixty-one, in 1825; the lowest seventeen, in 1812. The amount for the whole series is eight hundred.

The numbers in the column headed *Palsy*, vary between forty-seven, in 1824, the highest, and ten, in 1810, the lowest annual amount. The total of the whole series is five hundred and forty-eight.

It is gratifying to observe under the head of *Insanity*, that the proportion of deaths by it has not kept pace with the progress of population, since the amount in the last ten years is not even so great as that during the ten preceding. The highest number in any one year is forty-one, in 1818; the lowest thirteen, in 1809. The whole amount for the twenty years, is five hundred and fifteen. It should be observed, that the number of deaths under this head, is probably much beyond the fair proportion to the population of this city, since a very large amount of the patients in the Pennsylvania Hospital, the principal receptacle for the insane within the limits to which our statements are confined, have been brought from a distance.

The head of *Drunkenness*, for various reasons, presents us with but an imperfect criterion whereby to judge of the deplorable extent of the evil. In the first place, many die from diseases induced by this species of intemperance, whose deaths are reported under the name of those diseases. Oftentimes too, the physician from a regard for the reputation of the deceased or respect for the feelings of the relatives, has been induced to report the death under some other designation, substituting for example the name of a symptom. In this way it happens, that few cases are reported from direct drunkenness except such as occur in the most destitute and abandoned. The deaths by mania a potu, having for the last five years of the series been returned separately, are placed in the column of drunkenness, with their number designated in a marginal note. The whole amount is 558.

Suicide, appears to have become less frequent of late, as the amount for the last ten years of the series is only four greater than that for the first ten, notwithstanding the increase of population. The greatest number which occurred in any one year, was thirteen, in 1826. The amount for the twenty years is 102.

Under the head of *Cancer*, a steady increase is manifested, in running down the column. The highest number of deaths reported by it in any one year, is 23 in 1820; the lowest 4, in 1812. The number for the twenty years amounts to 272.

In the column headed *Gravel and Stone*, the diminution of

deaths is very obvious and highly gratifying. Whether this is owing to greater exemption from these diseases, increased professional skill, or to both, might afford an interesting subject for inquiry. The greatest number of deaths from these affections recorded for any one year, is five, in 1813. In 1820 and 1822, there are none reported. In 1823, one. The whole number in the twenty years is forty-six, of which only twenty have occurred within the last ten years.

The column headed *Parturition and Childbed*, although it may contain some few deaths by puerperal fever, does not embrace those reported under that title, the number of which will be found in other tables. Considerable fluctuation is observable in the yearly reports of these casualties, the highest number being twelve in 1807. For three years, viz: 1818, 1819, and 1823, no deaths were reported under this head. The whole number for the series is ninety, only thirty-eight of which have occurred within the last ten years. This, supposing all the casualties included except puerperal fever, would imply an improved state of the obstetric art.

The amount of deaths reported annually under the head of *Epilepsy*, varies from eighteen, in 1820, the highest number, to three, in 1813 and 1817, the lowest of the series. The whole amount is one hundred and seventy-five.

Table IV.

This table presents a summary of the deaths in Philadelphia for each month in a series of twenty years, with the number of adults and children designated. In the number of the latter, the still-born are included according to the usage of the Board of Health in their annual reports, it having been found impracticable to make an accurate monthly estimate of them for deduction. The nearest approach we can probably make to their numbers, is by reckoning them at about five per cent. of the sums stated for children, that being an average proportion for ten years.

Estimating the deaths in the whole series for the different seasons, we obtain the following results, viz:

	Adults.	Children.
In March, April, and May, - -	7229	- 5264
June, July, and August, - -	7606	- 9462
September, October, and November,	7545	- 6369
December, January, and February,	6909	- 5153

The months according to the mortality of both adults and children,

stand thus, beginning with the highest:—1st, August; 2d, July; 3d, September; 4th, October; 5th, June; 6th, March; 7th, April; 8th, November; 9th, January; 10th, December; 11th, May; 12th, February.

Arranged according to the greatest mortality of *adults* alone, they take the following order:—1st, August; 2d, September; 3d, October; 4th, April; 5th, March; 6th, July; 7th, January; 8th, November; 9th, June; 10th, February; 11th, December; 12th, May.

According to the greatest mortality of *children*, thus:—1st, August; 2d, July; 3d, September; 4th, June; 5th, October; 6th, March; 7th, November; 8th, December; 9th, January; 10th, April; 11th, May; 12th, February.

It is interesting to compare one of the results presented by this table, with calculations made in England, where the proportion of old persons who die during cold weather to those who die during the warm season, has been estimated as 7 to 4. The whole number of deaths of all ages is greatest in the months of January, February, and March; and least in June, July, and August; which, it will be seen, is widely different from what takes place in this part of America. The results in both countries are, however, at variance with the observations of Celsus, who, in treating upon the comparative salubrity of the different seasons in his time and country, says:—"Saluberrimum ver est; proxime deinde ab hoc hiems; periculosior æstas, autumnus longe periculosissimus."

Table V.

This table shows the ages at which the deaths from particular diseases occurred. The titles of the diseases have been copied from the bills of mortality A few of them designating accidents and affections of a vague character are omitted, as tending rather to perplex than to elucidate the subject. The alphabetical arrangement has been adopted as the most convenient.

Abscess, is the first affection which presents itself, but the particular kinds are left undesignated. The deaths were common to all ages, and it may be surmised, that most of those set down under the twentieth year, were of a scrofulous character.

In the number of deaths reported as by *Angina Pectoris*, we are inclined to attribute those included under the first year, to that kind of syncope or asphyxia sometimes affecting infants at birth, and a few days afterwards, the pathology of which differs essentially from that of angina pectoris common to more advanced life.

The deaths from *Asthma*, were most numerous after the age of puberty, and especially so between the 60th and 80th years.

The greatest number of deaths by *Cancer* and *Scirrhus* occurred between the ages of 40 and 50.

Of *Consumption*, the greatest mortality appears between the 30th and 40th years.

Dropsy of the Brain, exhibits the highest amount of deaths under the first year. Dropsy of the *Chest*, between the 40th and 50th years, and Dropsies of kinds not designated, (chiefly *Anasarca* and *Ascites*,) between the 30th and 50th years.

Of *Epilepsy*, most of the deaths reported, are included between the period of puberty and the 60th year.

Scarlet Fever, appears to have been chiefly fatal between the 2d and 20th years. *Fevers*, of other descriptions, exhibit the greatest mortality between the ages of 20 and 50.

Of *Gravel and Stone*, most of the deaths are included between the 40th and 90th years.

Of *Hæmorrhages*, the mortality is much the greatest between the 20th and 50th years.

Of *Insanity*, most of the deaths occurred between 30 and 40.

Of *Inflammation of the Brain*, the deaths were most numerous from early infancy to the age of 40. Of Inflammation of the *Lungs and Chest*, the highest number appears under the first year, but of the deaths which occurred from this form of inflammation in the latter stages of life, the greatest amount is between 30 and 40. From puberty however, to the most advanced age, the mortality appears to have maintained a regular ratio to the population. Of inflammation of the *Stomach and Bowels*, the deaths appear to have been much more common to the early stages of life, the highest number being under one year, and next greatest between the 20th and 30th years. Of inflammation of the *Liver*, most deaths are recorded between the 20th and 60th years. Of inflammation of the *Bladder*, between the 50th and 60th years. Of *Erysipelatous Inflammation*, much the greatest number of deaths are reported under the first year, and of those which occurred after the age of puberty, the most were between the 30th and 50th years.

The highest number of deaths by *Palsy*, appears between the 60th and 70th years, and nearly four-fifths of the whole amount reported, are in the period between the 40th and 90th years.

Most of the deaths from *Rheumatism*, occurred between the ages of 30 and 50.

The number of deaths from *Scrofula*, is nearly the same at every

period under the 30th year, but after this age, the proportion is quite small.

The deaths from *Small-pox*, were most numerous between the ages of 20 and 30, and nearly equally so under the first year. Some occurred even so late as the 70th and 80th years.

Under the head *Sudden*, most of the deaths, especially among infants, were probably occasioned by affections of obscure pathology. In very many instances, apoplexy has doubtless been reported under this title, more particularly when it has happened that the subject was not seen by a physician, previous to death.

Table VI.

The whole number of deaths reported in the Philadelphia bills of mortality from Jan. 1st, 1807, to Jan. 1st, 1827, still-born excluded, is fifty-three thousand and four.

This table exhibits the proportion of deaths by each of the most frequent diseases to the whole number of deaths. Its objects are so very perspicuous as to require neither explanation nor comment to make it understood.

Table VII.

This table shows the annual number of deaths of children, reckoning as such all under the twentieth year, according to the usage of the Board of Health.

Except a few remarks relative to *bowel complaints*, we shall leave comments upon this interesting table to others.

The number of deaths reported from *cholera*, the most fatal in the list, will be found varying considerably from year to year. The highest for any one year is two hundred and fifty-three, in 1823. The whole amount for the twenty years is three thousand six hundred and thirty-nine. The influence of the epidemic agents, which, for the last seven years have been so unusually active, is very perceptible in this column.

The last observation is likewise applicable to the deaths from *diarrhœa and dysentery*, the whole number of which for the series is one thousand three hundred and seventy-three, making the total amount of deaths under puberty, from bowel complaints of all kinds, five thousand and twelve.

Table VIII.

This table shows the deaths from diseases most incident to the early stages of life, with the proportion by each particular disease, to the whole

number of deaths under the age of puberty. To render the subject more distinct, the diseases are arranged according to their mortality.

Bowel complaints, as the most destructive, stand first in this order. Of these about two-thirds are under the general designation of *cholera*, nearly all of which were doubtless entitled to the specific appellation of *cholera infantum*, a disease almost peculiar to the United States, in many parts of which it exists endemically under the common name of *summer complaint*. Of three thousand eight hundred and twelve, the whole amount of deaths reported from cholera, adults and children inclusive, three thousand six hundred and thirty-nine were under the age of puberty, and three thousand five hundred and seventy-six under the fifth year, viz. two thousand one hundred and twenty-two under the first year, one thousand one hundred and eighty-six between the first and second years, and only two hundred and sixty-eight over the second year. As this affection seldom attacks those beyond the fifth year, the balance of two hundred and thirty-six between the amount at that period and the total at all ages may be considered as *cholera morbus*.

The proportion of deaths by cholera, to the whole number under the twentieth year, is 1 in 6.3; of diarrhœa and dysentery, 1 in 16.8; and of all kinds of bowel complaints as 1 in 4.6.*

The mortality of infants from *convulsions* is truly appalling, and for the whole twenty years amounts to three thousand three hundred and fifty-three, nearly a seventh part of the whole number of deaths under puberty. Of this sum, two thousand five hundred and fifty-six were under the first year, leaving a balance of only seven hundred and ninety-seven for the remaining nineteen years.†

* There are many reasons for believing that *cholera infantum* originates from a species of malaria similar to that giving rise to intermittent and remittent fevers and dysentery, in subjects of more advanced life, but modified by the age and peculiar circumstances incident to the city, a removal from which to the country generally acts like a specific in curing this affection. It may be further observed with regard to the numerous deaths among infants by this and other bowel complaints, that they are generally confined to the offspring of the poor, and especially prevail among the blacks. Indeed, deaths by cholera infantum rarely happen in houses with large and well aired apartments.

† The justly celebrated Tissot, in his *Avis au Peuple*, published at Paris towards the close of the eighteenth century, introduces some very excellent remarks relative to the convulsions of infants, which he regards as almost always induced by some other ailment or disease, especially from the retention of the meconium, the presence of acidities, or crude and indigestible substances in the bowels, teething and worms. The great prevalence of these affections in his time, with the obscurity which enveloped them, is well ex-

The class of *phlegmasiæ*, according to our arrangement, stands third in the scale of infantile mortality. The whole amount of deaths from inflammations of all kinds, in the twenty years, is two thousand and eighteen, the proportion of which to the deaths from all other diseases under puberty, is as one to eleven. The largest amount of any one affection is eight hundred and sixty-seven, from inflammation of the *lungs and chest*, being in the proportion of one in twenty-six of the whole amount of deaths under puberty from the phlegmasiæ. Of this amount it will be observed that much the highest number of deaths occurred under the first year. A diminution is apparent between this age and the tenth year, after which it rises again, and continues increasing for some years, as may be seen by reference to Table V.

The next highest number of deaths under this head, is six hundred and twenty, from inflammation of the *stomach and bowels*, the ratio of which to the whole amount of deaths from all infantile diseases, is as one in thirty-seven. Of these, the largest portion happened under the first year.

Inflammation of the *brain*, does not appear to have been fatal to those under the first year in the same proportion as the former affections, the sums of the four periods varying but little from each other. The lowest number is between the first and second years. The whole amount for twenty years is three hundred and nineteen, which is more than one-half of all the deaths in twenty years by the same affection, reckoning those of all ages.

With regard to the deaths from *measles*, which disease occupies the tenth place in our arrangement, much the greatest mortality appears between the first and fifth years, after which indeed but eighty-one deaths out of the whole amount of six hundred and fifty-four occurred.

Of Small-pox, the highest number of deaths recorded, is in the period between the second and fifth years. The whole number for the twenty years is six hundred and forty, which is considerably more than half the amount of deaths from this disease at all ages.

Catarrh, seems to have been extremely fatal during the first year of infancy, two hundred and sixty-one deaths having occurred in that time out of four hundred and twenty-one, the amount under puberty for the whole twenty years. This affection, it is probable, never

pressed in the following quotation from the above mentioned treatise:— Presque tous les enfans qui meurent avant l'âge d'un an, et même de deux, meurent avec des convulsions; l'on dit qu'ils sont morts de convulsions, et l'on a en partie raison. Vol. ji. Chap. xxvii. §. 378.

proves fatal, unless when it terminates in engorgement or inflammation of the mucous membrane of the lungs, or other portions of the contents of the chest.

The deaths from *atrophy, tabes, and marasmus*, have been all placed under the same head, as depending frequently upon the same causes, and often confounded together. The highest number is under the first year, namely, during the period of lactation.

Sore Throat, is a title so very indefinite that we shall pass it without comment.

In regard to most of the remaining diseases, the deaths from which are reported in this table, no observations occur to us which it would not be reckoned quite superfluous to mention in this place.

The deaths in childhood from *Erysipelatous inflammation*, amount in the twenty years to ninety-two, of which number sixty-four are represented as having occurred under the first year. From this estimate we may infer that the affection is much less fatal in this city than in many parts of Europe, particularly in their various lying-in hospitals.

Computing the whole number of deaths by inflammations of all kinds, for each period specified in the table, they would stand thus: under the first year, eight hundred and seventy-one—between the first and second years, three hundred and seventy-three—between the second and fifth, two hundred and ninety-nine—between the fifth and tenth, two hundred and eleven—and between the tenth and twentieth, two hundred and sixty-four—making altogether the sum of two thousand and eighteen.

The fourth class of diseases, according to the arrangment of the table, is that of *dropsies*, the proportion of deaths from which to those of all other diseases under puberty, is one in twelve. The whole amount of deaths from this source in the twenty years, is one thousand eight hundred and seventy-one, of which number, no less than one thousand five hundred and thirty-nine are reported as having occurred from *dropsy of the brain* alone, being one in fifteen of the deaths under puberty from all other causes. The highest number in any single period, is five hundred and thirty-one under the first year; the lowest, fifty-two, between the first and second years.

The number of deaths reported from *debility and decay*, make this head the fifth in the scale of mortality. There is much vagueness and obscurity in this title, and there can be little doubt that it has been often resorted to when the indications of the specific disease have been slightly or but imperfectly understood. The proportion of deaths before the age of puberty reported under this head is as one to fourteen of those from all other affections.

The deaths from *fevers* make this head the sixth in the scale, the whole amount of all kinds being one thousand four hundred and ninety-six, or one in fifteen of all other diseases under puberty.

Of *scarlet fever* the amount for the whole twenty years is ninety-three.

The number of deaths from fevers of all other kinds, increases as the age advances, being much the greatest under the last period.

Consumption is the seventh in the scale of mortality. As might be expected, the number of deaths increase by it, as the age advances.

Hives or Croup, occupies the eighth place. The whole amount of deaths during twenty years, from this very prevalent affection, is one thousand and thirty, being to the whole number of deaths under puberty from other diseases, as one in twenty-two. The number under the first year, is four hundred and thirty-five; between the first and second, two hundred and forty-three; between the second and fifth, two hundred and seventy-four; after which, the diminution is so great, that but one is reported as having died during the whole period between the ages of ten and twenty.

The same observations are likewise applicable in a general way, to *Hooping Cough*, with regard to which no further comment seems necessary in this place.

Table IX.

In this table, an estimate is given of the proportion of deaths in Philadelphia, to the population. The calculations are made to embrace the period between 1807 and 1820, as in the first of these years, the reports of deaths began, and in 1820, the last census by order of the general government was taken, there being no provision in Pennsylvania for taking a regular state census. Unwilling to rest our calculations upon conjecture, we shall estimate the population no further than the data are certain. To reckon the increase at the rate which subsisted between the years 1810 and 1820, would certainly lead to a false result, inasmuch as the intermediate period was one of almost constant commercial distress and embarrassment, directly calculated to repress the growth of population.

The estimate of inhabitants in this statement, has therefore been formed upon the official returns made to the general government, which give for those parts of the town from which returns of interments are made, in

1800 - - - - - -	71,378
1810 - - - - - -	98,282
1820 - - - - - -	121,980

The amount for each intermediate year has been calculated upon the supposition that the increase took place in a regular ratio. The smallest number of deaths in proportion to the population was 1 out of 56.53, in the year 1815: the greatest 1 in 38.25, in 1820. The average proportion for the whole series of fourteen years, is 1 death in 47.86 inhabitants.

In this calculation no regard has been paid to the difference existing between the mortality of the whites and blacks, which it will be presently seen, is such as to lessen considerably the average proportion for the white population.

It is only from the year 1821, that we find a distinction of colour made in the bills of mortality. As therefore we have not the power of ascertaining the precise rate at which the black population has increased since that time, in order to estimate the proportion of deaths to the number of inhabitants, we are compelled to appeal to conjecture for some of the data, or to abandon altogether this most interesting subject. To take as a basis the rate at which the black population increased between 1810 and 1820, might lead to much incorrectness, since in this period, owing to the existence of extraordinary circumstances, among which we may mention the epidemic of 1818, 1819, the increase was less than in former years. This is shown by refering to the last censuses, which give the number of blacks for the city and suburbs as follows:

In 1800 - - - - - -	6,467
1810 - - - - - -	9,913
1820 - - - - - -	11,384

Thus we find the increase between 1800 and 1810, amount to 37.7 per cent. or at an average of 3.7 per cent. per annum, whilst in the ten succeeding years it is only 14.8 per cent. or 1.48 per cent. per annum. Reckoning the increase since 1820, notwithstanding the late emigration to Hayti, at the rate of two per cent. per annum, the estimate of black population and the comparative proportion of its mortality, would stand as follows:

Year.	No. of Deaths per annum.	Population per annum.	Proportion of deaths to population as 1 in—
1821	686	11,611	16
1822	560	11,843	21
1823	800	12,079	15
1824	703	12,320	17
1825	495	12,566	25
1826	529	12,817	24
	3773	73,236	118

The average proportion of the deaths of blacks to their population, according to the most favourable computation, embracing a period of six years, is 5.1 per cent.

In the city and suburbs the blacks constituted, in 1820, about 9.3 per cent. of the whole population.

Of the whole amount of deaths reported in the bills of mortality during six years, about 16 per cent. were of blacks.

If, therefore, we deduct 9.3 per cent. as the proportion of blacks, from the total of the column of population, and from that containing the whole amount of deaths, about 16 per cent. as the proportion of blacks, the average mortality would be as 1 death in 50.8 of the white inhabitants, that of the blacks to their population being as 1 death in 19.

Table X.

This table exhibits a comparative view of the mortality of males and females, both of adults and children, from the year 1811, when a distinction of sex was first made in the annual reports, to the year 1826, inclusive: and likewise the number born in each year, both of males and females, since 1820, when the record of births first began.

It must be observed that the addition of the sums of males and females reported in this table, do not always make up those in the column of totals, as in some instances the distinction of sex has been omitted in the original certificates.

In the comparative estimate for sixteen years of the mortality of the sexes at all ages, that of females is on an average 23 per cent. less than that of males; being in the ratio of only 77 females to 100 males.

Of the deaths under the twentieth year, the excess of males is 18.5 per cent., being at the rate of about 81 males to 100 females; but of the whole mortality of adults, the excess of males amounts to 28 per cent., being in the proportion of only 72 women to 100 men.*

That part of the table appropriated to the *Births*, will serve to ex-

* Calculations in England make the proportion of deaths of women to that of men as 92 to 100. This disparity in the chances of life in the sexes, affects very greatly the estimates of pecuniary interests depending upon the duration of life, so that the prices of annuities for females to enjoy whilst living, are much higher than those demanded for men. It will be evident from the data furnished in this table, that the chances of life are still more favourable to the female sex in this part of America, than they are represented to be in England.

hibit with more accuracy the relative proportion of the sexes, than to afford correct comparative estimates of the relative proportions existing between the births, deaths, and population. Leaving, therefore, all other calculations till the data shall be less equivocal, we will only observe, that the proportion of the sexes at birth is about 91 females to 100 males.

Table XI.

This table exhibits the ages at which the deaths in Philadelphia have occurred in each one of a series of twenty years. Beginning with the deaths which took place under the first year of life, and ending with those between one hundred and ten and one hundred and twenty, the whole time is divided into fifteen periods,* the mortality at each of which in proportion to the whole amount, with ages designated,† is as follows:—

Under 1	year,	as	1 in	4.6
Between 1	and 2		1	11.
2	5		1	14.
5	10		1	25.
10	20		1	20.
20	30		1	8.4
30	40		1	7.6
40	50		1	9.6
50	60		1	13.
60	70		1	18.
70	80		1	27.
80	90		1	45.
90	100		1	156.
100	110		1	873.
110	120		1	7363.

The statement contained in this table of the periods of life, at which each of fifty-one thousand five hundred and forty-four individuals of all ages and conditions died, constitutes the best foundation we possess for an estimate of the *mean duration of human life* in

* Another period, namely, between the tenth and twentieth years, has of late been introduced into the bills of mortality, but it is thought best to continue the table with the distinctions first established.

† Of the whole amount of deaths reported during twenty years, viz: fifty-three thousand and four, there were one thousand four hundred and sixty, whose ages were unknown, leaving the number of deaths with ages designated, fifty-one thousand five hundred and forty-four.

Philadelphia at this epoch. The sum of the ages at which the deaths occurred, divided by the number of the deceased, gives 29.35 years as the mean duration. This is the result of an average of twenty years, the mean of each of which is given in the column next to that containing the amount of deaths for each year. It is interesting to observe the variations in the successive years occasioned by the greater or less mortality of children.

It is a rule applicable to calculations of this nature, that the multiplicity of observations destroy the operation of accidental circumstances, and establish those depending upon certain and regular causes.*

It is therefore evident, that had the number of observations of the ages at which deaths occurred been greater, the mean value would have been so much the more accurate.

* The ancient Romans kept with great exactness registers or tables, showing the births, sex, periods of puberty, manhood, age at death, diseases, &c. Domitius Ulpianus, prime minister to Alexander Severus, estimated from these records the mean duration of human life in ancient Rome in his time, at thirty years.

TABLE I.

Thermometrical Observations made in Philadelphia, from the Spring of 1811, *to the Spring of* 1820, *inclusive.*

Spring Months.	Lowest Fall.*	Highest Rise.†	Mean Temperature.‡	Summer Months.	Lowest Fall.*	Highest Rise.†	Mean Temperature.‡	Autumnal Month.	Lowest Fall.*	Highest Rise.†	Mean Temperature.‡	Winter Months.	Lowest Fall.*	Highest Rise.†	Mean Temperature.‡
1811 March	28	69	40	June	62	86	70	September	59	83	70	December	18	52	36
1811 April	35	70	48	July	72	93	80	October	43	79	60	January (1812)	6	41	28
1811 May	46	76	60	August	66	86	73	November	34	56	45	February	14	45	30
1812 March	22	60	38	June	61	82	70	September	49	77	60	December	23	48	30
1812 April	32	75	45	July	60	83	72	October	40	71	54	January (1813)	12	50	30
1812 May	42	75	50	August	60	80	70	November	28	63	40	February	20	40	32
1813 March	24	54	40	June	58	86	74	September	56	85	62	December	26	44	32
1813 April	40	70	55	July	63	89	70	October	35	64	50	January (1814)	18	40	31
1813 May	48	75	58	August	64	85	72	November	30	59	41	February	19	49	34
1814 March	21	57	36	June	58	78	68	September	51	82	65	December	20	47	30
1814 April	40	66	50	July	60	85	70	October	38	77	50	January (1815)	10	46	30
1814 May	53	78	61	August	60	85	72	November	31	65	45	February	15	40	30
1815 March	29	60	40	June	62	89	70	September	50	84	60	December	16	56	32
1815 April	41	72	53	July	68	92	80	October	41	64	54	January (1816)	6	46	30
1815 May	50	78	60	August	63	90	78	November	31	65	42	February	8	58	32
1816 March	14	70	40	June	50	90	70	September	56	83	62	December	27	64	35
1816 April	33	75	45	July	66	78	70	October	52	67	54	January (1817)	19	51	30
1816 May	38	76	58	August	64	87	70	November	34	74	50	February	4	50	25
1817 March	28	60	35	June	55	85	70	September	50	84	70	December	10	54	40
1817 April	40	80	50	July	64	87	78	October	39	68	55	January (1818)	11	48	32
1817 May	50	79	60	August	59	86	75	November	31	73	55	February	9	54	30
1818 March	25	68	42	June	64	92	75	September	50	82	65	December	17	52	30
1818 April	40	64	50	July	71	97	79	October	40	73	65	January (1819)	19	51	35
1818 May	43	84	60	August	65	86	70	November	36	65	50	February	22	60	40
1819 March	21	66	47	June	56	91	75	September	54	88	70	December	21	50	40
1819 April	34	79	55	July	67	92	78	October	38	76	55	January (1820)	11	40	30
1819 May	50	82	62	August	63	94	75	November	29	67	48	February	14	69	35

* Taken at 8 o'clock A. M. in the shade and open air.

† Taken at 3 o'clock P. M.

‡ Estimated by observing the temperature at sunrise in the shade and open air, and at 3 o'clock P. M. the two extremes of temperature.

N. B. Fahrenheit's thermometer was used in making the above observations.

TABLE II.

Abstract from the Census of the City and County of Philadelphia, taken in 1820, *by order of the General Government, showing the number and description of Inhabitants in the Wards and Districts, from which returns of Interments are made.*

WARDS AND INCORPORATED DISTRICTS.	WHITE POPULATION.															COLOURED POPULATION.									Others untaxed.	Total population of the Wards and Districts.
	MALES.						FEMALES.					Foreigners not naturalized.	Number of persons engaged in Horticulture.	Number of persons engaged in Commerce.	Number of persons engaged in Manufactures.	MALES.				FEMALES.						
	Under 10 years.	Of 10 and under 16.	Between 16 and 18.	Of 16 and under 26.	Of 26 and under 45.	Of 45 and upwards.	Under 10 years.	Of 10 and under 16.	Of 16 and under 26.	Of 26 and under 45.	Of 45 and upwards.					Under 14 years.	Of 14 and under 26.	Of 26 and under 45.	Of 45 and upwards.	Under 14 years.	Of 14 and under 26.	Of 26 and under 45.	Of 45 and upwards.			
City Wards, - -	7247	3305	1562	5921	6332	2980	7155	4160	7215	7065	3637	777	156	2984	6100	1052	674	1079	351	1172	1323	1374	554	1203		63802
Passyunk Incorporation,	257	151	70	185	142	105	183	139	167	141	91	5	643		28	4	25	11	4	19	13	1				1638
Kensington Do. -	1216	467	126	532	837	401	1180	483	647	748	467	163	12	15	512	17	16	13	16	23	18	22	15			7118
Northern Liberties, Wards,	2945	1108	448	1717	2017	1026	2888	1284	2112	2299	1384	92	7	318	1866	174	66	112	76	140	119	136	75			19678
Do. Incorporation,	270	132	38	153	160	136	280	119	191	177	119	76	223	9	159	19	5	8	8	12	11	7	3			1810
Penn - - Do.	484	190	61	312	344	195	429	199	334	313	158	418	401	37	469	24	15	18	10	26	22	20	11			3105
Moyamensing - Do.	448	213	51	186	369	147	477	162	186	409	192	29	280	98	218	217	57	223	95	117	81	285	99			3963
Southwark - Do.	2307	951	317	868	1856	353	2085	997	1372	2167	725	208	34	131	898	175	56	190	12	187	134	248	30			14713
Spring Garden Do.	589	664	91	350	307	136	545	321	404	314	173	9		17	199	18	10	11	1	20	13	13	5	4		3498
Blockley - Do.	356	169	62	245	298	163	377	172	249	301	151	94	153	17	119	36	28	20	9	21	34	19	7			2655
	16119	6950	8826	10469	12662	5642	15599	8036	12877	13934	7097	1871	1909	3626	10568	1736	952	1685	582	1737	1768	2125	799	1207		121980

TABLE III.

Statement of Deaths in Philadelphia for a series of twenty years, viz: from January 1st, 1807, to January 1st, 1827, inclusive: containing the amount for each year, and number which occurred from the most prevailing Diseases.

Year.	Whole number of Deaths.*	Diseases of the Lungs.			Fevers.					Inflammations.								Dropsies.				Bowel Complaints.			Convulsions.	Croup.	Hooping Cough.	Measles.	Small Pox.	Asthma.	Apoplexy.	Palsy.	Insanity.	Drunkenness.	Suicide.	Cancer.	Gravel and Stone.	Parturition and Child-bed.	Epilepsy.	Still-born.
		Consumption.	Acute Affections.	Total.	Bilious and Remittent.	Nervous and Typhus.	Yellow and Malignant.	Type not designated.	Total.†	Brain.	Lungs and Chest.	Stomach, Bowels, and Peritoneum.	Liver.	Spleen.	Bladder and Kidneys.	Uterus.	Heart and Pericardium.	Total.	Brain or Head.	Chest.	Not designated.	Total.	Cholera.	Diarrhœa and Dysentery.	Total.															
1807	1961	306	93	399	31	44	3	53	131	12	93	29	9		2			145	48	20	54	122	189	145	334	127	55	17		32	16	30	18	31	14	9	9	4	12	5	84
1808	2145	301	101	402	45	35		71	151	22	101	34	25					182	52	18	67	137	230	114	344	145	53	11	73	145	4	34	17	25	5	4	9	1	4	12	126
1809	1884	311	65	376	52	62		24	138	11	65	50	12					138	40	41	34	115	153	57	210	170	33	96		101	12	31	25	13	8	5	9	1	1	8	120
1810	1897	306	85	391	32	46	3	52	133	16	85	63	20		1			184	44	43	42	129	206	45	251	183	49	32	1	33	11	31	10	29	12	6	7	3	1	5	139
1811	2249	369	77	446	37	54	5	45	141	14	77	45	26					162	47	35	75	157	240	83	323	162	40	54	2	117	8	46	28	32	8	2	12	2	5	4	137
1812	2017	339	74	413	29	40	3	43	115	11	74	63	14					162	50	15	49	114	157	44	201	177	20	24	20		7	17	23	30	4	3	4	1	3	4	142
1813	2223	216	61	277	30	107	6	50	193	8	61	54	18					141	38	18	42	98	178	100	278	166	34	29	1		13	29	14	25	3	1	7	5	4	3	66
1814	2041	274	71	345	16	107	7	37	167	11	71	44	24					150	40	29	35	104	127	91	218	174	22	23	9		5	25	18	22	5	5	19	2	6	7	96
1815	1943	347	135	482	40	92	2	44	178	21	135	50	21					227	65	19	53	137	94	77	171	180	20	6	7		7	50	21	36	7	6	9	3	7	5	97
1816	2225	434	149	583	39	84	2	68	193	23	149	35	18		4			229	83	21	52	156	90	63	153	167	30	46	2	97	16	36	22	27	8	8	14	4	9	5	94
1817	2107	349	96	445	37	101	4	69	211	21	96	60	26		2			205	65	20	64	149	137	92	229	167	22	21		52	8	25	32	24	17	2	17	2	5	3	110
1818	2609	396	74	470	89	322		81	492	22	74	76	21		2			195	67	5	99	171	203	80	283	141	48	6		8	8	40	37	41	10	1	7	2		9	156
1819	2979	459	131	690	92	133	13	39	277	33	131	78	20		3			265	92	8	131	231	260	103	363	201	80	151	108	1	15	57	20	28	24	3	17	3		13	145
1820	3189	446	141	586	231	123	73	99	526	41	141	57	27	1	6	3		275	115	17	77	209	263	191	454	162	89	11	47		11	44	36	20	31	4	23		1	18	185
1821	2161	438	121	559	211	117		74	402	29	134	69	46		6	2	3	289	99	22	73	194	191	189	380	153	63	36		6	49	40	28	22	7	14	4	6	14	211
1822	3334	488	124	612	223	149		126	498	47	124	76	29	2	5	1	1	284	120	36	87	243	212	249	461	179	73	38		15	41	28	24	[a]66	6	18		4	3	257
1823	4372	536	141	677	253	243		248	744	46	141	106	37	2	5	1	1	339	147	47	81	241	265	297	562	214	67	79	156	160	7	54	39	17	[b]65	6	19	1		14	228
1824	4284	576	178	760	169	317		161	647	66	178	119	35		2	2		402	124	29	68	221	164	133	297	368	84	42	102	325	7	50	47	23	[c]75	2	17	3	8	7	115
1825	3539	519	145	664	147	91	1	123	362	64	145	81	36	2	8	2		338	140	40	90	270	209	153	362	237	75	40	38	6	21	61	42	24	[d]95	9	19	3	10	13	273
1826	3845	587	222	809	194	104		123	421	60	222	102	54	2	3	2	2	447	126	38	78	242	244	171	415	258	84	43	101	3	8	50	31	16	[e]83	13	19	2	4	16	306
Totals.	53004	7977	2284	10281	1998	2371	122	1629	6120	583	2284	1291	518	9	49	13	7	4758	1602	521	1351	3474	3812	2477	6289	3731	1041	805	667	1080	205	800	548	515	558	102	272	46	90	175	3087

* The sums in this column include all the deaths per annum, except such as were reported under the head of *Still-born*, which are given in a separate column.

† Scarlet, puerperal, and some other fevers under different designations, are not embraced in this total, which is meant to include those only of most frequent prevalence.

[a] Including 41 returned mania a potu.—[b] 31 do.—[c] 53 do.—[d] 64 do.—[e] 55 do.

TABLE IV.

Summary of the Deaths in Philadelphia for each month in a series of twenty years, with the number of Adults and Children, including Still-born, according to the annual reports of the Board of Health.

	January.			February.			March.			April.			May.			June.			July.			August.			September.			October.			November.			December.		
	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.
1807	92	58	150	73	45	118	109	45	154	111	46	157	90	43	133	91	68	159	101	136	237	117	151	268	140	97	237	108	54	162	101	54	155	71	44	115
1808	91	45	136	73	50	123	91	63	154	96	73	169	81	98	179	95	132	227	111	263	374	109	188	297	88	97	185	71	83	154	81	71	152	59	62	121
1809	73	57	130	67	51	118	95	46	141	80	56	136	66	84	150	82	102	184	53	131	184	183	107	290	87	80	167	91	85	176	83	106	189	63	76	139
1810	82	67	149	82	70	152	87	40	127	96	56	152	99	65	164	68	79	147	63	129	192	91	178	269	91	82	173	104	89	193	86	66	152	87	79	166
1811	79	69	148	79	78	157	102	87	189	95	60	155	105	74	179	97	80	177	125	126	251	124	203	327	104	92	196	131	107	238	100	95	195	100	74	174
1812	114	89	203	98	59	157	87	63	150	128	77	205	85	59	144	76	69	145	68	92	160	60	155	215	59	108	167	51	42	93	51	44	95	36	28	64
1813	77	52	129	54	28	82	70	59	129	93	59	152	82	38	120	60	58	118	54	114	168	85	148	233	85	94	179	66	45	111	57	39	96	61	54	115
1814	49	49	98	61	41	102	79	48	127	101	80	181	57	69	126	71	65	136	67	104	171	122	160	282	73	62	135	85	47	132	87	70	157	86	50	136
1815	88	43	131	70	52	122	116	66	182	113	49	162	99	58	157	126	71	197	78	75	153	124	102	226	90	85	175	105	64	169	119	58	177	122	67	189
1816	99	82	181	118	83	201	105	88	193	109	69	178	108	75	183	135	91	226	131	97	228	113	123	236	100	106	206	97	95	192	82	60	142	98	55	153
1817	98	59	157	89	81	170	106	79	185	131	76	207	140	73	213	119	76	195	86	113	199	107	123	230	125	108	233	86	60	146	94	48	142	112	38	150
1818	163	72	235	150	61	211	151	89	240	161	75	236	138	66	204	149	71	220	143	178	321	137	175	312	105	118	223	95	74	169	139	59	198	120	76	196
1819	120	72	192	106	89	195	141	118	259	117	97	214	120	84	204	121	138	259	122	216	338	136	296	432	127	161	288	103	139	242	102	152	254	96	151	247
1820	96	135	231	99	97	196	127	136	263	138	101	239	113	83	196	126	112	238	124	217	341	262	321	583	171	144	315	178	133	311	136	92	228	131	110	241
1821	114	87	201	114	101	215	134	105	239	126	98	224	143	102	245	151	106	257	169	95	264	200	252	452	146	121	267	175	121	296	164	126	290	129	93	222
1822	158	114	272	120	94	214	143	92	235	124	86	210	142	122	264	139	119	258	173	268	441	175	195	370	204	174	378	231	122	353	163	127	290	173	133	306
1823	186	128	314	158	96	254	122	85	207	177	113	290	116	94	210	160	210	370	183	303	486	205	290	495	279	272	551	235	222	457	240	205	445	305	216	521
1824	272	166	438	318	201	519	250	230	480	199	143	342	163	126	289	171	181	352	141	173	314	160	228	388	210	181	391	192	122	314	165	126	291	125	156	281
1825	145	144	289	147	86	233	216	147	363	140	91	231	139	128	267	156	203	359	254	296	550	182	192	374	163	152	315	126	123	249	160	124	284	156	142	298
1826	194	134	328	191	148	339	149	205	354	190	200	390	138	127	265	139	186	325	183	332	515	153	200	353	184	174	358	230	167	397	144	145	289	122	116	238
Totals.	2390	1722	4112	2267	1611	3878	2480	1891	4371	2525	1705	4230	2224	1668	3892	2332	2217	4549	2429	3458	5887	2845	3787	6632	2631	2508	5139	2560	1994	4554	2354	1867	4221	2252	1820	4072

TABLE V.

Statement of the Deaths in Philadelphia from the principal Diseases, for a period of twenty years, viz: from January 1st, 1807, to January 1st, 1827; together with the ages at which they took place.

NAMES OF DISEASES.	Under 1 year.	Between 1 and 2.	Between 2 and 5.	Between 5 and 10.	Between 10 and 20.	Between 20 and 30.	Between 30 and 40.	Between 40 and 50.	Between 50 and 60.	Between 60 and 70.	Between 70 and 80.	Between 80 and 90.	Between 90 & 100.	Between 100 & 110.	Between 110 & 120.	Unknown.	Totals.
Abscess	13	7	10	15	11	46	54	31	23	14	5					4	233
Aneurism	1		1		6	6	11	10	8	3	1						47
Angina Pectoris	8		5	8	9	11	15	11	8	2							77
Anthrax									1	2	1						4
Apoplexy	12	8	10	5	14	68	122	154	154	131	80	30	4	1		7	800
Apthæ or Thrush	41	8	1	2				3		1							56
Asthma	13	4	9	4	8	10	29	25	20	34	33	12	4				205
Atrophy, Tabes and Marasmus,	186	61	47	14	19	18	36	33	40	42	32	11	3				542
Bowel Complaints, viz: Cholera,	2122	1186	268	52	11	25	35	31	25	21	11	4				21	3812
Diarrhœa and Dysentery	513	382	254	125	99	176	215	186	193	155	107	43					2477
Burns and Scalds	29	37	78	39	14	21	18	11	7	11	4	1	1	1		3	275
Cancer and Scirrhus			4	1	3	17	41	69	54	37	26	15			1	1	272
Catarrh	261	78	63	12	7	20	36	13	16	17	14	5	2			2	546
Colic	26	10	3	2	9	21	36	30	29	11	18	3		1		3	202
Consumption	185	143	167	140	510	1842	1986	1401	774	431	211	64	4			119	7977
Convulsions	2556	387	249	105	56	101	100	62	40	18	10	6		1		42	3731
Childbed and Parturition					5	39	35	8								3	90
Debility and Decay	1072	243	167	87	70	141	240	247	256	282	247	129	18	2		72	3273
Diabetes			1		1	3		2	3	1	1						12
Disease of the Hip Joint	1	1		7	9	4	2	1				2					27
Dropsy (kind not designated)	39	27	59	30	70	141	235	241	190	169	94	43	4			8	1351
of the Brain	531	399	366	191	52	26	14	7	4	1						10	1602
of the Chest	18	19	20	21	29	63	81	84	74	51	37	10	2			13	521
Drowned	7	1	6	86	94	126	148	90	37	13	3	1				26	642
Drunkenness and Mania a potu					4	98	176	157	78	33	7	1				8	558
Epilepsy	16	4	14	6	24	19	33	31	20	3	1	2				2	175
Fever, Puerperal					10	107	59	12								2	190
Scarlet	8	11	37	17	20	5	2	2									102
Other kinds	209	154	293	262	578	1348	1286	1038	693	373	214	64	14	3	1	33	6564
Fungus Hæmatodes						1				1	1	1					4
Gangrene and Mortification	60	24	55	25	19	33	40	41	29	33	28	18	3	1		4	413
Gout						3	7	9	21	18	11	4				1	74
Gravel and Stone	2	1	2	3	2	1	3	6	9	7	6	3	1				46
Hernia	2		1			6	4	7	11	12	6	3				1	53
Hives or Croup	435	243	274	77	1	3		3		1	1	1				2	1041
Hooping Cough	325	241	191	42	4	1											804
Hæmorrhage (of all kinds)	19	2	7	9	28	45	55	43	29	18	6	7	3	1		2	274
Hydrophobia				2	3	2		1	2								10
Icterus or Jaundice	31	1	1	4		11	12	12	11	5	3					1	92
Insanity					3	101	184	111	64	29	14	2				7	515
Influenza	8	3	1	1	2	2	6	5	6	6	7	3		1		2	53
Inflammation of the Brain	72	43	65	64	75	79	84	45	23	23	4	2				4	583
Lungs and Chest	392	183	142	60	90	230	312	311	213	180	110	36	5	1		20	2284
Stomach and Bowels	297	116	72	63	72	155	144	109	76	58	38	9	2			3	1214
Liver	37	21	10	17	9	80	109	92	80	37	19	5				2	518
Bladder	5		1		3	6	5	6	13	2	7	1					49
Heart and Pericardium			1			2	1	1		1	1						7
Spleen	1				1	3		2	1	1							9
Uterus and Peritoneum	3		1	3	6	28	21	7	3	4							76
Erysipelatous	64	10	7	3	8	8	19	21	10	7	2	3					162
Measles	121	237	215	71	10	6	3	2								2	667
Old Age										28	260	515	240	42	4		1089
Palsy	4	5	2	3	14	26	45	76	106	113	106	42	2			4	548
Rickets and Curved Spine	1	5	3	1			3	1								1	15
Rheumatism	1	1	3	1	16	15	21	25	15	22	12	5				2	139
Scrofula	35	36	41	31	34	26	35	10	10	10	2					1	269
Small Pox	150	123	175	121	71	168	134	71	22	5	4					36	1080
Sore Throat	98	49	76	43	16	16	15	15	11	8	4	2				2	355
Sudden	74	11	10	24	8	95	209	137	122	63	19	6	3			17	798
Suicide					5	24	30	21	13	4	1	1				3	102
Syphilis	18	5	3	2	4	48	33	16	4	2						1	136
Spina Bifida	12		5	4	6		2	1									30
Tumours	1		2		5	5	2	4	2	5							26
Teething	108	103	41	3													255
Tetanus	13	1	6	13	22	24	28	12	2	2						2	125
Ulcers	10	1	7	4	6	10	12	9	11	9	2	2	3			3	89
Worms	25	54	102	54	8			1			1					2	247

TABLE VI.

Showing the proportion of Deaths in Philadelphia by each of the most frequent Diseases, to the whole number of Deaths; estimated from a series of twenty years, and arranged so as to form a scale of mortality.

Order of Mortality.	DISEASES.	Whole Number of Deaths.	Being to the whole amount of Deaths as 1 in—	Whole number of Deaths from Diseases of a similar class.	Proportion of Deaths from Diseases of a similar class to the whole number of Deaths, as 1 in—
1	Consumption	7977	6.6		
2	Bowel Complaints; viz. Cholera	3812	13.9	6289	8.4
	—— Dysentery and Diarrhœa	2477	21.4		
3	Fevers; viz. Puerperal	190	278.		
	—— Scarlet	102	519.5		
	—— Typhus, Remittent, and other kinds	6564	8.		
4	Inflammations; viz. of the Lungs and Chest	2284	23.2	4758	11.1
	—— Stomach and Bowels	1214	43.6		
	—— Brain	583	90.1		
	—— Liver	518	102.3		
	—— Uterus and Peritoneum	76	695.5		
	—— Kidneys and Bladder	49	1081.7		
	—— Heart, Pericardium and Spleen	18	2944.6		
	—— Erysipelatous	162	327.1		
5	Convulsions	3731	14.2		
6	Dropsy (kind not designated)	1351	39.2	3474	15.2
	—— of the Brain	1602	33.		
	—— of the Chest	521	101.7		
7	Debility and Decay	3273	16.2		
8	Old Age	1089	48.6		
9	Small Pox	1080	49.		
10	Hives or Croup	1041	50.9		
11	Hooping Cough	804	63.1		
12	Apoplexy	800	66.2		
13	Sudden	798	66.4		
14	Measles	667	79.5		
15	Catarrh	546	97.		
16	Atrophy, Tabes and Marasmus	542	97.8		
17	Gangrene and Mortification	413	130.7		
18	Sore Throat	355	149.3		
19	Burns and Scalds	275	192.7		
20	Hæmorrhage of all kinds	274	193.4		
21	Cancer and Scirrhus	272	198.8		
22	Asthma	205	258.5		
23	Cholic	202	262.4		
24	Epilepsy	175	302.8		
25	Rheumatism	139	381.3		
26	Syphilis	136	389.7		
27	Tetanus or Locked Jaw	125	424.		
28	Suicide	102	519.6		
29	Parturition and Childbed	90	588.9		

TABLE VII.

Statement of the Mortality in Philadelphia, from those Diseases which occur most commonly under the age of puberty with the number of Deaths which took place in each year of a series of twenty years.

Years.	Bowel Compl.			Convulsions.	Dropsies.			Inflammations.						Debility and Decay.	Fevers.		Consumption.	Hives or Croup.	Hooping Cough.	Measles.	Catarrh.	Atrophy, Tabes, and Marasmus.	Sore Throat.	Teething.	Worms.	Gangrene and Mortification.	Epilepsy.	Tetanus.
	Cholera.	Diarrhœa and Dysentery.	Whole number of Bowel Complaints.		Of the Brain.	Of the Chest.	Of all kinds.	Of the Lungs.	Stomach & Bowels.	Brain.	Liver.	Erysipelas.	Of every kind.		Scarlet.	All others.												
1807	183	72	255	127	44	4	54	24	20	4	1	2	51	28	1	39	36	54	17		1	19	5	10	37	7	2	6
1808	217	68	285	118	44		51	37	16	9	7	3	72	41	2	38	53	51	11	71	19	22	6	10	18	9	4	5
1809	147	51	198	146	36	6	45	17	25	6	1	2	51	24	3	36	45	31	95		8	7	5	15	13	4	2	3
1810	201	29	230	167	41	14	60	25	21	7	5		58	42	2	39	33	46	32	1	3	7	12	7	15	5	1	1
1811	224	24	248	134	35	9	57	30	22	4	4	3	63	40	2	59	47	40	52	2	6	7	20	20	10	11	4	3
1812	154	27	181	163	48	4	56	21	49	11	3	4	88	30	1	33	50	20	24	20	16	10	14	11	8	10		
1813	173	59	232	157	37	6	49	18	33	4	8	2	65	28		59	17	34	29		2	8	12	9	8	3	2	2
1814	125	43	168	162	39	1	45	25	28	4	7	4	68	33		45	51	21	21	8	11	15	10	10	4	7	3	1
1815	92	43	135	168	60	9	78	25	19	19	7	1	71	44		44	107	19	6	7	11	10	11	8	9	4	3	2
1816	87	26	113	147	80	2	89	50	18	9	4	8	89	51		34	58	38	45	2	40	15	10	23	12	9	1	
1817	130	60	190	157	61	8	77	29	29	10	2	4	74	35		38	64	21	21		20	14	9	26	14	6		2
1818	196	36	232	123	67		82	33	43	14	3	4	97	62	1	50	42	48	6		10	34	16	17	7	6	1	
1819	246	55	301	184	89	2	125	66	32	22	3	4	127	100	2	70	66	80	150	106	24	33	24	13	11	12	5	2
1820	249	117	366	152	114	6	134	79	25	27	3	7	141	115	30	146	75	87	11	47	24	15	16	4	9	11	6	2
1821	177	111	288	136	98	8	118	60	32	19	6	7	124	111	13	77	57	63	36		20	21	21	14	10	7	7	6
1822	200	108	308	166	117	5	130	40	41	24	6	2	123	139	8	108	64	73	38		26	17	14	11	13	9		1
1823	253	172	425	192	144	8	172	62	38	25	3	13	148	194	8	199	77	67	79	155	21	23	28	10	14	26	5	10
1824	155	76	231	336	124	9	142	93	55	35	4	9	196	163	8	134	77	84	42	99	45	10	30	11	10	14	6	4
1825	197	96	293	205	138	2	163	52	28	33	3	7	133	169	8	113	60	75	46	38	60	18	14	15	9	15	3	4
1826	233	100	333	232	123	4	143	82	46	32	14	5	179	188	4	138	56	79	42	98	54	20	5	12	6	8	9	4
Totals.	3639	1373	5012	3353	1539	107	1870	867	620	319	94	92	2018	1639	93	1496	1145	1030	803	654	421	327	282	256	243	183	64	55

TABLE VIII.

Statement of the Mortality in Philadelphia, from Diseases most incident to the early periods of Life, for a series of twenty years, viz: from January 1, 1807, to January 1, 1827; showing the proportion of Deaths from each particular disease to the whole number of Deaths under twenty years of age. The names of diseases arranged in the order of their mortality.

	NAMES OF DISEASES.	Under 1 year.	Between 1 and 2.	Between 2 and 5.	Between 5 and 10.	Between 10 and 20.	Totals.	Proportion of Deaths by individual diseases to the whole number as 1 in—
1	Cholera	2122	1186	268	52	11	3639	6.3
	Diarrhœa and Dysentery	513	382	254	125	99	1373	16.8
	Whole number of Bowel Complaints	2635	1568	522	177	110	5012	4.6
2	Convulsions	2556	387	249	105	56	3353	6.9
3	Inflammation of the Lungs	392	183	142	60	90	867	26.
	—— Stomach and Bowels	297	116	72	63	72	620	37.
	—— Brain	72	43	65	64	75	319	73.
	—— Liver	37	21	10	17	9	94	246.
	—— Erysipelatous	64	10	7	3	8	92	251.
	—— Other kinds	9		3	4	10	26	890.
	Whole number from inflammations	871	373	299	211	264	2018	11.
4	Dropsy of the Brain	531	399	366	191	52	1539	15.
	—— of the Chest	18	19	20	21	29	107	216.
	—— kinds not designated	39	27	59	30	70	225	102.
	Whole number of dropsical affections	588	445	445	242	151	1871	12.
5	Debility and Decay	1072	243	167	87	70	1639	14.
6	Fever, Scarlet	8	11	37	17	20	93	249.
	—— Other kinds	209	154	293	262	578	1496	15.
7	Consumption	185	143	167	140	510	1145	20.
8	Hives or Croup	435	243	274	77	1	1030	22.
9	Hooping Cough	325	241	191	42	4	803	28.
10	Measles	121	237	215	71	10	654	35.
11	Small Pox	150	123	175	121	71	640	36.
12	Catarrh	261	78	63	12	7	421	55.
13	Atrophy, Tabes and Marasmus,	186	61	47	14	19	327	70.
14	Sore Throat	98	49	76	43	16	282	82.
15	Teething	108	103	41	3		255	90.
16	Worms	25	54	102	54	8	243	95.
17	Burns and Scalds	29	37	78	39	14	197	117.
18	Gangrene and Mortification	60	24	55	25	19	183	126.
19	Scrofula	35	36	41	31	34	177	130.
20	Sudden	74	11	10	24	8	127	181.
21	Epilepsy	16	4	14	6	24	64	361.
22	Abscess	13	7	10	15	11	56	413.
23	Tetanus or Locked Jaw	13	1	6	13	22	55	421.
24	Aphthæ or Thrush	41	8	1	2		52	443.
25	Icterus or Jaundice	31	1	1	4		37	625.
26	Syphilis	18	5	3	2	4	32	723.
27	Spina Bifida	12		5	4	6	27	857.
28	Disease of the Hip Joint	1	1		7	9	18	1286.
29	Gravel and Stone	2	1	2	3	2	10	2316.
30	Hernia	2		1			3	7720.

TABLE IX.

An Estimate of the Proportion of Deaths in the City and Suburbs of Philadelphia, to the population, for each year of a series of fourteen years; together with the average number for the whole period.

Year.	Whole No. of Deaths.	Population.	Proportion of Deaths to population as 1 in
1807	1961	89,270	45.52
1808	2145	92,190	42.97
1809	1884	95,180	50.52
1810	1897	98,282	51.80
1811	2249	100,428	44.65
1812	2017	102,619	50.87
1813	2223	104,900	47.18
1814	2041	107,149	52.49
1815	1943	109,500	56.53
1816	2225	111,900	50.29
1817	2107	114,300	54.24
1818	2609	116,800	44.74
1819	2979	119,400	40.08
1820	3189	121,980	38.25
			14) 670.13
Average proportion of deaths to population as 1 in			47.86

TABLE X.

Statement of the Deaths of Adults and Children, Males and Females, for each of the following years; together with the Births for a part of the time.

Years.	DEATHS.						Number of Deaths per annum.	BIRTHS.		
	Male Adults.	Male Children.	Whole number of Males.	Female Adults.	Female Children.	Whole number of Females.		Males.	Females.	Whole number of Births per annum.
1811	719	562	1281	525	433	958	2239			
1812	505	419	924	417	381	798	1722			
1813	521	308	829	322	388	710	1539			
1814	540	373	913	425	289	714	1627			
1815	763	371	1134	490	284	774	1908			
1816	703	450	1153	585	399	984	1537			
1817	748	438	1186	545	379	924	2110			
1818	925	512	1437	754	441	1195	2632			
1819	795	824	1619	616	659	1275	2894			
1820	955	780	1735	740	693	1433	3168	1709	1501	3210*
1821	937	721	1658	636	588	1224	2882	2630	2417	5047
1822	1171	815	1986	763	651	1414	3400	3021	2701	5722
1823	1329	1110	2439	1031	1032	2063	4502	2977	2836	5813
1824	1017	1303	2320	1076	919	1995	4315	3062	2771	5833
1825	1119	932	2051	855	830	1685	3736	3444	3182	6626
1826	1055	1142	2197	985	962	1947	4144	3526	3219	6745

* This amount is only for the last nine months of the year, as the registry commenced on the 1st of April, 1820.

TABLE XI.

The Ages or Periods of Life at which the Deaths in Philadelphia have occurred in each year of a series of twenty years, viz: from January 1, 1807, to January 1, 1827. The Still-born are excluded.

Years.	Under 1 year.	Between 1 and 2.	Between 2 and 5.	Between 5 and 10.	Between 10 and 20.	Between 20 and 30.	Between 30 and 40.	Between 40 and 50.	Between 50 and 60.	Between 60 and 70.	Between 70 and 80.	Between 80 and 90.	Between 90 and 100.	Between 100 and 110.	Between 110 and 120.	Whole No. of Deaths per annum.*	Average mean duration of life for each year.
1807	295	235	121	65	79	144	236	172	139	88	79	60	11	4		1961	28.41
1808	457	284	167	98	95	212	219	186	128	98	61	30	7	2		2145	25.53
1809	466	172	92	52	74	203	226	159	95	77	67	44	14	1	1	1884	27.76
1810	452	169	115	59	73	240	264	163	142	96	68	45	9	2		1897	29.61
1811	451	188	164	77	101	281	290	208	158	95	79	27	11	4		2249	28.25
1812	395	165	92	53	70	159	245	167	114	82	72	34	10			2017	29.21
1813	365	144	130	64	62	107	186	158	120	102	68	51	7	1	1	2223	30.03
1814	390	122	104	53	72	154	239	175	132	106	78	42	18	2		2041	31.67
1815	358	116	97	89	147	254	249	238	155	103	73	48	15	1		1943	32.25
1816	338	168	171	133	81	272	366	265	154	126	68	63	15	5		2225	30.44
1817	438	138	134	73	96	256	325	222	162	106	84	61	11	1		2107	31.50
1818	472	214	118	68	94	370	446	316	187	138	90	67	24	5		2609	32.90
1819	706	334	269	121	130	345	364	262	171	113	96	41	20	6	1	2979	25.80
1820	650	307	241	130	175	443	396	313	202	152	96	61	18	3	2	3189	28.36
1821	633	215	193	102	138	405	396	324	221	154	97	61	21	1		2161	30.22
1822	696	243	193	121	168	424	441	348	264	217	130	67	18	4		3334	31.24
1823	854	401	299	184	232	537	336	462	312	214	137	76	24	3	1	4372	26.67
1824	936	384	364	221	255	409	486	435	309	218	177	67	20	3		4284	28.15
1825	836	250	232	128	140	432	479	373	263	171	122	85	24	4		3539	29.76
1826	844	380	285	134	188	429	452	380	271	209	135	98	32	7	1	3845	29.30
Totals.	11032	4629	3581	2025	2470	6076	6641	5326	3699	2665	1877	1128	329	59	7	53004	29.35

* This column gives the whole amount of deaths, including those where the age of the deceased was not reported.

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